DOCUMENT RESUME

ED 170 229 SO 011 687

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TITLE Economics Education at the Post Secondary Level: Its Development and Research Activities.
PUB DATE 79
NOTE 15p.; Paper presented at Annual Meeting of the American Educational Research Association (San Francisco, California, April 1979)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Economic Education; Economic Research; Educational History; Educational Objectives; Educational Theories; *Higher Education; Postsecondary Education; Teaching Methods

ABSTRACT

This paper reviews the research in economics education at the postsecondary level, discussing the kinds of research, summarizing the conclusions, and suggesting areas for further research. Economics education developed in three phases. From 1865-1900 political economy was incorporated into the curriculum. In 1900-1930 the emphasis was on commercial education and the goal shifted to understanding the world. The 1930s saw a debate between advocates of classical principles and government intervention, but from 1940-1960 employment theory or social accounting became popular. Since the 1960s the systematic investigation of economics education has emerged due to many factors including new testing devices, research workshops, and educational innovations. The majority of the research has been done on the postsecondary Principles of Economics course ascertaining the effects of different teaching methods. During the last few years, there have been some studies using new perspectives and analytical techniques seldom used before. This should continue, with a broadening of scope to include other economics courses and non-formal postsecondary economics education activities, including the impact of primary sources. (CK)

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AERA 1979

Session 3.10/Economic Education

Issues and Perspectives in the School Curriculum
(Symposium, Div. B)

Economics Education at the Post Secondary Level: Its Development and Research Activities

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Paper presented at Annual Meeting of the American Educational Research Association (San Francisco, California, April 1979)

SP 011 687

INTRODUCTION

With few exceptions, systematic efforts to measure the effectiveness of economics education at the post-secondary level have been concentrated in the last two decades while concern for effective economics education, in general, is as old as the American Economic Association, the major professional society of American economists.

The purpose of this paper is to review the research that has taken place in economics education at the post-secondary level, with the major thrust of my comments designed to:

1. Describe the kinds of research that have characterized post-secondary economics education.
2. Summarize the conclusions of the body of research.
3. Outline areas for future research endeavors.

In order to place the economics education research activities in a proper perspective, I will first provide a summary of the historical development of economics education. This development to a great extent determined the kinds of research that have occurred since 1960.

THE DEVELOPMENT OF ECONOMICS EDUCATION

The members of the American Economic Association exhibited a keen interest in economics education in its earliest days. In an organizational meeting in 1886, Richard T. Ely stated, "One aim of our association should be the education

of public opinion in regard to economic questions and economic literature. In no other science is there so much quackery and it must be our purpose to expose it and bring it into merited contempt."[1]

In the fourth annual meeting of the association, Francis A. Walker, its president and author of a widely used principles of economics textbook, created a standing committee on the teaching of political economy.[2]

The interest the association displayed, like the booms and busts its members so intently studied, waxed and waned over time. In an attempt to view in an organized way the goals, content, and methodologies exercised in the principles of economics course over the last century, it is useful to identify several time periods -- albeit artificial -- reflecting different thrusts and interests, and examine these periods in terms of the content, methodology, and goals of economics education as expressed in the principles course. Following the guidance of Lawrence Leamer,[3] the following periods emerge as reasonable phases in the development of economics education as reflected in the typical college courses.

Phase I, 1865-1900. This is a period in which political economy emerged as a legitimate discipline in American colleges and universities as the receding shadows of the Civil War left a wake strewn with economic problems.

Phase II, 1900-1930. This period was characterized by increased collegiate enrollments and emphasis on commercial education, not unlike the current interest shown in consumer economics.

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[1] Quoted from the article by Lawrence Leamer, "A Brief History of Economics in General Education," which provides a fascinating review of the early economics course and approaches, American Economic Review, p. 22, Vol. 402, 1950.

[2] Ibid, p. 22.

[3] Leamer, Lawrence, "A Brief History of Economics in General Education," American Economic Review, Vol. 42, 1950, p. 22- .

Phase III, 1930-1960. The dissatisfaction with the economic system during the early part of this phase was reflected in the content and the way economics was taught. The latter part featured the introduction of employment theory into the principles course.

Phase I: 1865-1900

The real impetus to formal incorporation of political economy into the curriculum came shortly after the Civil War. L. Lawrence Laughlin authored a little book in May, 1885 (the same year in which the American Economics Association was organized) entitled, The Study of Political Economy. In it he attributed the rise in the popularity of economics directly to the Civil War:

> In fact, it is now unquestionable that a new interest in economics and finance has already arisen, and the cause of it seems to be very clear. The Civil War was, so to speak, the convulsion which brought into existence a desire for the study of political economy in the United States. The country was stirred to its depths by economic questions: for they entered into the political issues of exciting campaigns. The war issues thus did for the United States -- in a different way, of course -- even more than the corn-law agitation did for England. They actually gave birth to new motives for study. There never has been a time in our history when there was so evident a desire to get light on the economic problems of the day as now (1885).

The most frequently cited aim of economics education was its value as a mental exercise. There was no shortage of ideas on how best to teach economics. Again, I quote Laughlin:

> The key to efficient teaching of (political economy) is to connect principles with actual facts: and this process can go on in the beginner's mind only through experience. By experience I mean the personal (subjective) effort of each one to realize the working of the principle for himself in the facts of his own knowledge.
>
> The relative advantage of lectures and recitations for political economy have never to my knowledge been openly discussed. An experience with both methods of teaching leads me to think that the lecture system, pure and simple, is so ineffective that it ought to be set aside at once as entirely undesirable. The disciplinary power to be gained by the study is almost wholly lost to the student by this method of teaching.

His recommendations could have been written today. They include:

1. use of recitation
2. writing questions on the chalkboard
3. using newspapers
4. using charts and diagrams
5. using graphs
6. testing for applications, not facts

He also urged his students to write in their textbooks and form discussion clubs of three-to-four people.

Phase II: 1900-1929

The goals of the introductory course in economics were thoughtfully expressed by A.B. Wolfe of Oberlin College at a conference on the teaching of elementary economics in 1909. Wolfe suggested the following goals:

a. Students should acquire a general knowledge of the organization and processes of the business world sufficient to enable them to read the newspaper - even the financial page - with something approaching intelligent comprehension, and gain the power and willingness to see something outside the economic class to which they belong and the business or the industry which they know a little about.

b. Students should get the beginnings on an intelligent interest in politicio-economic questions and and policies.

c. Students should have their inherited and habitual prejudices shaken up; should begin to acquire the elements of the judicial fairmindedness and critical cautiousness of which we all ought to have more when dealing with practical economic issues.

d. Students should gain a stimulus to a desire for economic justice throughout society and a background upon which to view various large and small schemes of social reform.

The methodology should be:

1. The effective presentation of facts and principles.
2. The personal discussion of these facts and principles with the student in order to clear up difficulties, insure comprehension, etc.
3. The drilling of the student in reproducing and applying economic principles.
4. The testing of the student as to the correctness, fullness, and adequacy of his knowledge and his capacity to apply it.

The goals of economics education shifted from mental discipline to broader goals. In 1899, the American Economic Association published "Economics as a School Study" by Frederick R. Chow. His report notes that:

"...economics helps people to understand the great individual world in which they live. To most men the industrial world is the only one that exists, it is their whole being. Now economics turns the light of scientific investigation on the phenomena of this world "[1]

By this time economics was creeping into the high schools and a debate raged as to whether economics was an appropriate discipline for that group of students. Among the adherents were Ely, Taussig, Laughlin, all of whom had written textbooks. They expressed concern however, over the poorly prepared teachers and especially about the capacity of pupils. They felt materials (textbooks available) were adequate. President Capen of Tufts stated:

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[1]/Chow, Frederick R., "Economics as a School Study." Economic Studies, Vol. III, p. 183.

"The subject is so broad and so profound and has so many ramifications, requiring so much knowledge on kindred subjects before it can be thoroughly digested and applied, that I sometimes doubt the wisdom of trying to teach it to immature minds."[1]

The approach of the authors of some of the better known textbooks is instructive. Irving Fisher addressed part of the preface in his economics textbook to the methods of writing economics textbooks.[2]

Of the many possible methods of writing economic textbooks, there are three of which follow well-defined though widely different orders of topics. These are "historical," the "logical," and the "pedagogical."

- The historical method follows the order provided by economic history,
- The logical approach begins with a classification of economics in relation to other studies, explains its methodology, and then proceeds by means of abstract examples from the simplest imaginary case of "Robinson Crusoe economics" to the more complex conditions of real life.
- The pedagogical approach begins with the student's existing experience, theories, and prejudices as to economic topics, and proceeds to mold them into a correct and self consistent whole.

The order of the first method, therefore is from ancient to modern, that of the second from simple to complex; and that of the third, from familiar to unfamiliar.

Phase III: 1930-1960

Economics education fell to its lowest state during the early part of this period, the 1930's. The principles course became a whipping boy for the economic events which troubled the nation. The profession - the American Economic Association - relegated concern for economic education to periodic roundtable discussions where the problems of teaching were dealt in a bull-session manner, each participant calling upon his personal experiences as providing the guidance for future teaching. The profound concern in 1935, for example, was the extent

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[1] Ibid., Chow, p. 199.

[2] Fisher, Irving, Elementary Principles of Economics, Macmillan: New York, 1913, p. viii.

to which economics students should follow developments in the New Deal by reading current magazines as supplements to the textbook. After considerable debate in which Frank Knight suggested we not rely on the "pink weeklies" entirely and John R. Commons urged that students should find out what the science of economics was and what are its laws, H.L. McCracken summarized the debate by stating that there are two views:

> One is that classical principles of economics are still the basic principles and the automatic forces of supply and demand will be the major forces operating to bring about a recovery. The other is that the economic order had come to such a pass by 1933 that a considerable amount of government intervention was necessary, and any realistic attempt to teach economic principles must reckon with that fact.[1]

In 1940, in another roundtable discussion, four criticisms were leveled against the introductory economics courses found in American colleges: (1) they have no clear objective; (2) they lack any semblance of unity, having become hodgepodges of unrelated subjects; (3) they are already so overcrowded that adequate treatment of content is impossible; (4) the college students admitted to them are without the necessary background.

However, help was on the way. In 1942, a little 212-page introductory economics book with the title The Social Framework, authored by J.R. Hicks, changed both the order and content of most principles courses. I quote from the preface of this work:

> I have written this book because I have come to hold a particular point of view about the right way to arrange economics for elementary study. Until lately the problem of how to begin the study of economics reduced itself to a dilemma: either one might begin with economic theory - which meant in practice the theory of supply and demand - or one might begin with descriptive economics, the practical problems of industry and labor. (He then cited difficulties with each approach).

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[1] American Economic Review, March 1935, Supplement Vol. XXV, No. 1, "The New Deal and the Teaching of Economics," pages 11-12.

As a result of the developments in economic knowledge which have taken place during recent years, we are now in a position to resolve this dilemma.... It is now possible to mark out a preliminary stage in economic study, which is wholly concerned with topics which are obviously interesting and important, and which is yet systemmatic enough to give some of the mental discipline necessary for study on a scientific level.

This change has come about because the chapters on definitions, which formed so indigestible a portion of the old textbooks, have been kindled into life by the work of economic statisticians and also by some of the newer developments of economic theory. They have grown into a distinct branch of economics, a branch which is being pursued with very special success at the present time, and which is, nevertheless particularly suited to serve as an introduction to the science in general. If we want a name for it, it might be described as Social Accounting, for it is nothing else but the accounting of the whole community or nation...

This approach of Hicks was popularized by Samuelson in his first edition, (1948) and the rest is history. He justified the inclusion of this new material as follows:

Over the past few years, several thousand civilian and armed-forces students - largely studying engineering or business - have been introduced in the M.I.T. required beginning course to such topics as saving and investment and income determination. The tentative verdict of the more than two dozen instructors that have participated is that introductory analysis of income determination is easier and more interesting than introductory value and distribution theory.[1/]

Although Samuelson popularized employment theory, credit should be given to Lorie Tarshis who, in 1947, a year earlier than Samuelson, published a principles book entitled, The Elements of Economics, that included an entire section on national income and employment.[2/]

The approaches and principles of economics books following in Hicks', Tarshis', and Samuelson's wake brings us back to the era, 1960 to the present.

[1/] Samuelson, Paul A., Economics, McGraw-Hill: New York, (First edition), 1948.

[2/] Tarshis, Lorie, The Elements of Economics, Houghton-Mifflin: Boston, 1947.

POST-SECONDARY EDUCATION RESEARCH

Given the long standing interest in post-secondary economics education, it is reasonable to ask why the systematic investigation of economics education effectiveness emerged so suddenly in the 1960's? Important among the reasons are:

1. The expansion and growth of the Joint Council on Economic Education and its related network of college and university center directors.
2. A program conducted by the Stanford Graduate School of Business held in the summer of 1966 entitled, "New Developments in the Teaching of Economics," and subsequent publication of the proceedings edited by Keith G. Lumsden Its main emphasis was on the methodology in teaching economics rather than on the content.
3. The publication by The Psychological Corporation of the Test of Understanding of College Economics in 1968. Development of this test was recommended by the Committee on Education of the American Economic Association. Its preparation was supervised by a committee appointed by the Joint Council on Economic Education.
4. Four successive economics education research workshops funded by the General Electric Foundation held at Carnegie-Mellon and Purdue Universities, 1969-72.
5. The establishment of the Journal of Economic Education in 1969.
6. The application to economics of educational innovations such as programmed-learning, television, computer assisted instruction, and personalized systems of instruction.
7. The accessability of statistical computer programs.

A review of the research literature in post-secondary reveals that the overwhelming share of research has been conducted on the principles of economics course. This is not surprising given the history of economics education cited earlier.

Weisbrod summarized the economic education research studies appearing in the Journal of Economic Education and in the annual American Economic Association sessions of economic education.[1/] They are shown in Table 1 which he prepared. 77 percent of the studies emphasize teaching at the college level and most of them deal with the principles of economics course. There are several reasons for this:

1. The historical importance of the principles of economics course as cited earlier.
2. In terms of the numbers of students affected, it is clear that the principles of economics course is most important.
3. The publication of the Test of Understanding of College Economics by the Psychological Corporation in 1967 provided a high quality nationally normed instrument for evaluating the principles of economics course.
4. The persons most likely to undertake research in economics education are coordinators of the principles of economics course or directors of centers for economic education. Both groups have vested interests in this course.
5. The content of this course is fairly homogenous.

The dominant type of research undertaken in conjunction with the principles course has been to ascertain the effects of different instructional methods. They include: programmed learning, television, computer assisted instruction,

Table 1

Number of Articles on Various Production Function Relationships for Economics Education, by Type of Input and Level of School

Type of Input	Level of School: Elementary And High	Junior College	College	Graduate	Non-School	All Levels	
I. Capital							
A. Textbooks	2		2			4	
B. Computers			9			9	
C. Television, slides, etc.		1	5		1	7	
						20	(25%)
II. Labor							
A. Instructors	6	1	4			11	
B. Graduate Assistants			5			5	
C. Consultants	1					1	
						17	(22%)
III. Students (ability, motivation, family background, other students)	1		4			5	(6%)
IV. Course Content (subject matter)	2	2	7			11	(14%)
V. Instructional Methods (ways of combining inputs)							
A. Games and Simulations		1	7			8	
B. Learning contracts, self-paced instruction and programmed learning			11			11	
C. Lectures			1			1	
D. Course evaluations			4			4	
E. Length of course			1			1	
F. Class size			1			1	
						26	(33%)
Total	12 (15%)	5 (6%)	61 (77%)	0	1 (1%)	79 (100%)	

games and simulations, and personalized systems of instruction. If one is looking for an overall generalization, it would have to be quite simply that the effect of the innovation, whatever it is, has not been statistically significant.

Given the very narrow focus of post-secondary economic education research, it is clear that opportunity exists for a broadening of its scope. Not only should the courses under study be expanded to include more than simply the principles course, but a vast area of non-formal post-secondary economics education activities remains to be examined. This is important since only a small percentage of the population actually receives its education from the classroom. Newspapers, newsmagazines, company and union house organs, and television specials are the primary sources for post-secondary economic education and we have little information on the impact it has had. Employer economics education programs are conducted by many companies, but virtually nothing is known about its impact.

The analytical approaches used in economics research have also been relatively few. The most frequently used approach has been linear multiple regression. Johnson, in a recent article on how well research in economic education is answering the questions asked has stated:[1/]

> In reviewing the research on economic education I have sensed a growing maturity in the use of statistical and econometric techniques. However,....this research has not been prolific in providing examples and problems for econometric research.

[1/] Johnson, Thomas, "Research on Economic Education: How Well it is Answering the Questions Asked?" a paper presented at the annual meetings of the American Economic Association in Chicago, Illinois on August 31, 1978.

It is surprising that the research in economics education has borrowed so little from the analytical tool kit of economics. There are, however, several exceptions. One of the exceptions is a study by Staaf in which an important concept in microeconomics is used to explain why it may not be at all unusual to expect no significant improvement in the understanding of the material in a course stemming from an innovation in that course.[1/]

In conclusion, the past two decades have provided a period in which numerous studies have been undertaken with a limited number of analytical tools on a narrowly focused set of research problems. The last few years of this period, however, have seen the emergence of new perspectives in which more and different sophisticated analytical techniques, including economic analysis are being used to scrutinize a broad range of economic education problems.

[1/] Staaf, Robert J., "Student Performance and Changes in Learning Technology in Required Courses," Journal of Economic Education, Spring, 1972.